

REMARKS

Applicants acknowledge receipt of the Office Action dated May 18, 2009.

Status of the Claims:

Claims 1, 10, 12, 18 and 23 are currently amended.

Claims 25-43 are withdrawn.

Claims 9, 22, and 44-88 are canceled without prejudice. Applicants retain the right to pursue the subject matter of these claims at a later time, for example, via a continuing application.

As such, claims 1-8, 10-21, and 23-43 are pending in this application.

Claim Rejections Under 35 U.S.C. §103(a)

Marelius* in view of *Larson

In item 6 of the office action, claims 1-8, 11 and 87 are rejected as being unpatentable over *Marelius* et al. (WO 90/15031 hereinafter “*Marelius*”) in view of *Larson* (US 3,586,624, hereinafter “*Larson*”). Claim 87 is now canceled.

Claim 1 is currently amended to require the system to comprise an air blower and an air distribution pipe operable to deliver air to the biomass pile, a cover configured to form an enclosure around the biomass pile; and the system configured to sequentially subject the biomass to oxidative lime pretreatment and anaerobic fermentation in the formed enclosure. The support for such amendments is found in Figure 2; page 3, line 22 – page 4, line 4; page 14, lines 4-13; page 22, lines 25-32 of the filed application, for example. *Marelius* is directed to a forced anaerobic decomposition process (see, for example, abstract; page 3, lines 31-35). *Larson*, as cited by the office action, teaches “a structure for adding chemical supplements to the liquid distribution system”. Even if, *arguendo*, one of ordinary skill in the art were to modify *Marelius* in view of *Larson*, he would have at best arrived at a system configured for **forced anaerobic decomposition** with “a structure for adding chemical supplements to the liquid distribution system”, not a system that is configured to subject the biomass to **oxidative lime pretreatment**

and anaerobic fermentation, as required by claim 1. Therefore, the system of claim 1 is non-obvious over the combination of *Marelius* and *Larson*.

Since claims 2-8 and 11 depend from claim 1, they also are non-obvious over *Marelius* in view of *Larson*.

Marelius* in view of *Larson* and *Hudgins

In item 7 of the office action, claims 9 and 87 are rejected as being unpatentable over *Marelius* in view of *Larson* taken further in view of *Hudgins* et al. (US 6,024,513, hereinafter *Hudgins*). Claims 9 and 87 are now canceled.

Furthermore, Applicants respectfully submit that one of ordinary skill in the art would not have combined *Hudgins* with *Marelius* modified by *Larson* as suggested in the office action. *Hudgins* discloses the use of a landfill's leachate collection system for distribution of air into the waste mass (column 4, lines 19-41); whereas *Marelius* is directed to a forced anaerobic decomposition system. Since it is unlikely to encounter leachate generation and leaking issues in a forced anaerobic decomposition system, there is no motivation for one of ordinary skill in the art to supplement the forced anaerobic decomposition system with a leachate collection system. Indeed, the addition of a leachate collection system as disclosed in *Hudgins* to a forced anaerobic decomposition system as disclosed in *Marelius* is unnecessary and thus illogical for one of ordinary skill in the art to implement.

The rationale provided in the office action that "it is conventional in the art to convert an anaerobic biomass treatment system into an aerobic system by using the leachate collection system as an air injection system" based on the teachings of *Hudgins* is an over-generalization. A leachate collection system has its specific context of usage – where leachate is generated and needs to be collected, such as the case of landfill, which is not the case for a forced anaerobic decomposition system as discussed in *Marelius*. To use the leachate collection system for air injection would further require that the leachate collection system be installed in place already. Therefore, there is no motivation or logical means for one of ordinary skill in the art to apply the teachings of *Hudgins* to the system of *Marelius*.

Marelius in view of Larson and Hudgins and Young and Lynn

In item 8 of the office action, claim 10 is rejected as being unpatentable over *Marelius* in view of *Larson* and *Hudgins* taken further in view of *Young* et al. (US 5,5935) and *Lynn* (US 3,973,043).

The alleged rejection of claim 10 is based on the combination of *Marelius* in view of *Larson* and *Hudgins*. As discussed in the previous section, such a combination has no underlying rationale that is reasonable or logical. Therefore, a *prima facie* case of obviousness has not been established and claim 10 is non-obvious over the combination of *Marelius* and *Larson* and *Hudgins* and *Young* and *Lynn*.

For the *Young* reference, Applicants believe that the correct document should be US Patent No. 5,591,635 instead of US Patent No. 5,5935. Please advise if Applicants have identified the wrong reference.

Wildenauer in view of Dibble or Norlund and Taylor and Furuta

In item 9 of the office action, claims 12-14, 19, 20 and 22 are rejected as being unpatentable over Wildenauer (US 4,758,344, hereinafter “*Wildenauer*”) in view of Dibble et al. (US 4, 668,388, hereinafter “*Dibble*”) or Norlund (US 4,952,230, hereinafter “*Norlund*”) and Taylor et al. (US 4,230,676, hereinafter “*Taylor*”) taken further in view of Furuta (JP 08-245285, hereinafter “*Furuta*”). Claim 22 is now canceled.

Applicants submit that the office action seems to have left out a paragraph detailing the combination of *Wildenauer*, *Dibble* or *Norlund*, and *Taylor*.

Claim 12 is currently amended to require the system to comprise an air blower and an air distribution pipe operable to deliver air to the biomass pile; the roof configured to form an enclosure around the biomass pile; and the system configured to sequentially subject the biomass to oxidative lime pretreatment and anaerobic fermentation in the formed enclosure. The support for such amendments is found in Figure 2; page 3, line 22 – page 4, line 4; page 14, lines 4-13; page 22, lines 25-32 of the filed application, for example.

Applicants respectfully submit that the system taught by *Wildenauer* as the primary reference in this combination is configured to subject the organic waste to a biological aerobic process and a biological anaerobic process in separate enclosures, see, for example, Figure;

abstract; Col. 2, lines 31-68; Col. 4, lines 33-38 of *Wildenauer*. This is distinctly different from the system of claim 12 as currently amended, which requires that the system is configured to sequentially subject the biomass to oxidative lime pretreatment and anaerobic fermentation in the formed enclosure, i.e., in the same enclosure. According to MPEP 2143.01, “the proposed modification cannot change the principle of operation of a reference”. Therefore, any combination of references taking *Wildenauer* as the primary reference will necessarily abide by the principle of operation of *Wildenauer*, which is to accomplish a biological aerobic process and a biological anaerobic process in separate enclosures.

For at least the reasons stated above, claim 12 is non-obvious over *Wildenauer* in view of *Dibble* or *Norlund* and *Taylor* and *Furuta*. Since claims 13-14 and 19-20 depend from claim 12, they also are non-obvious over *Wildenauer* in view of *Dibble* or *Norlund* and *Taylor* and *Furuta*.

Marelius* in view of *Larson*, *Furuta* and *Wildenauer

In item 10 of the office action, claims 12-14, 19-21, 24 and 88 are rejected as being unpatentable over *Marelius* in view of *Larson*, *Furuta* and *Wildenauer*. Claim 88 is now canceled.

Marelius, the primary reference of this combination, is directed to a forced anaerobic decomposition system (see, for example, abstract; page 3, lines 31-35). There is no teaching in *Marelius* concerning oxidative lime pretreatment. According to MPEP 2143.01, “the proposed modification cannot change the principle of operation of a reference”. Therefore, any combination of references taking *Marelius* as the primary reference will necessarily abide by the principle of operation of *Marelius*, which is to accomplish forced anaerobic decomposition. This is distinctly different from the system of claim 12, which requires the system be configured to sequentially subject the biomass to oxidative lime pretreatment and anaerobic fermentation.

For at least the reasons stated above, claim 12 is non-obvious over *Marelius* in view of *Larson*, *Furuta* and *Wildenauer*. Since claims 13-14, 19-21 and 24 depend from claim 12, they also are non-obvious over *Marelius* in view of *Larson*, *Furuta* and *Wildenauer*.

Marelius in view of Larson, Furuta and Wildenauer and Still

In item 11 of the office action, claim 15 is rejected as being unpatentable over *Marelius* in view of *Larson, Furuta and Wildenauer* taken further in view of *Still* (DE 2057413, hereinafter “*Still*”).

Marelius in view of Larson, Furuta and Wildenauer and Smit

In item 12 of the office action, claims 16-18 are rejected as being unpatentable over *Marelius* in view of *Larson, Furuta and Wildenauer* taken further in view of *Smit* (EP 0673901, hereinafter “*Smit*”).

As discussed in the section “*Marelius* in view of *Larson, Furuta and Wildenauer*”, claim 12 as currently amended is non-obvious over a combination of references taking *Marelius* as the primary reference. Since “the proposed modification cannot change the principle of operation of a reference” (MPEP 2143.01), any combination of references taking *Marelius* as the primary reference will necessarily abide by the principle of operation of *Marelius*, which is to accomplish **forced anaerobic decomposition**. This is distinctly different from the system of claim 12, which requires the system be configured to sequentially subject the biomass to **oxidative lime pretreatment and anaerobic fermentation**.

Claim 15 depends from claim 12. Therefore, claim 15 is non-obvious over *Marelius* in view of *Larson, Furuta and Wildenauer* taken further in view of *Still*.

Claims 16-18 depend from claim 12. Therefore, they also are non-obvious over *Marelius* in view of *Larson, Furuta and Wildenauer* taken further in view of *Smit*.

Marelius in view of Larson, Furuta and Wildenauer and Hudgins

In item 13 of the office action, claims 22 and 88 are rejected as being unpatentable over *Marelius* in view of *Larson, Furuta and Wildenauer* taken further in view of *Hudgins*.

Claims 22 and 88 are now canceled.

Marelius in view of Larson, Furuta and Wildenauer and Hudgins and Young and Lynn

In item 14 of the office action, claim 23 is rejected as being unpatentable over *Marelius* in view of *Larson, Furuta and Wildenauer* and *Hudgins* taken further in view of *Young and Lynn*.

As previously discussed, claim 12 as currently amended is non-obvious over a combination of references taking *Marelius* as the primary reference. Claim 23 depends from claim 12, therefore claim 23 is non-obvious over *Marelius* in view of *Larson*, *Furuta* and *Wildenauer* and *Hudgins* taken further in view of *Young* and *Lynn*.

Furthermore, as discussed in section “*Marelius* in view of *Larson* and *Hudgins*”, there is no motivation or logical means for one of ordinary skill in the art to apply the teachings of *Hudgins* to the system of *Marelius*. The combination of *Young* and *Lynn* with *Marelius* is only possible if *Hudgins* is properly combined with *Marelius*. Because the combination of *Hudgins* with *Marelius* has no underlying rationale that is reasonable or logical, a *prima facie* case of obviousness has not been established. Therefore, claim 23 is non-obvious over *Marelius* in view of *Larson*, *Furuta* and *Wildenauer* and *Hudgins* taken further in view of *Young* and *Lynn*.

CONCLUSION

Applicants respectfully request reconsideration and allowance of the pending claims and a timely Notice of Allowance be issued in this case. If the Examiner feels that a telephone conference would expedite the resolution of this case, the Examiner is respectfully requested to contact the undersigned.

In the course of the foregoing discussions, Applicants may have at times referred to claim limitations in shorthand fashion, or may have focused on a particular claim element. This discussion should not be interpreted to mean that the other limitations can be ignored or dismissed. The claims must be viewed as a whole, and each limitation of the claims must be considered when determining the patentability of the claims. Moreover, it should be understood that there may be other distinctions between the claims and the prior art that have yet to be raised, but which may be raised in the future.

If any fees are inadvertently omitted or if any additional fees are required or have been overpaid, please appropriately charge or credit those fees to Conley Rose, P.C. Deposit Account Number 03-2769.

Respectfully submitted,

/Timothy S. Westby/
Timothy S. Westby
Reg. No. 52,352
CONLEY ROSE, P.C.
P.O. Box 3267
Houston, Texas 77253-3267
(713) 238-8000
ATTORNEY FOR APPLICANTS